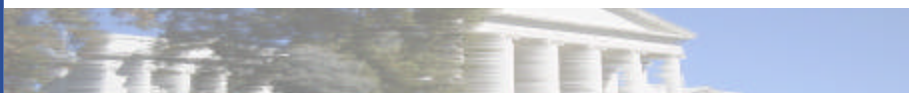**Strategic Planning in Technology: A Preview**

The Honorable Eugene J. Huang
Deputy Secretary of Technology

A Presentation to the Joint Commission on
Technology and Science
June 18, 2002

Vision

The mission of the Secretary of Technology is to advise the Governor on the growth of technology in our global economy and the effective use of information technology in state government.

Strategic Imperatives

Three imperatives guide the strategic planning process:

1. Develop Virginia as a major entity in the global economic marketplace.

2. Ensure that all of Virginia shares in the growth and success of our participation in the global economic marketplace.

3. Develop the role as the CIO of Virginia's technology resources so that they are the most effective and efficient and meet the needs of our customers - the citizens of the Commonwealth.

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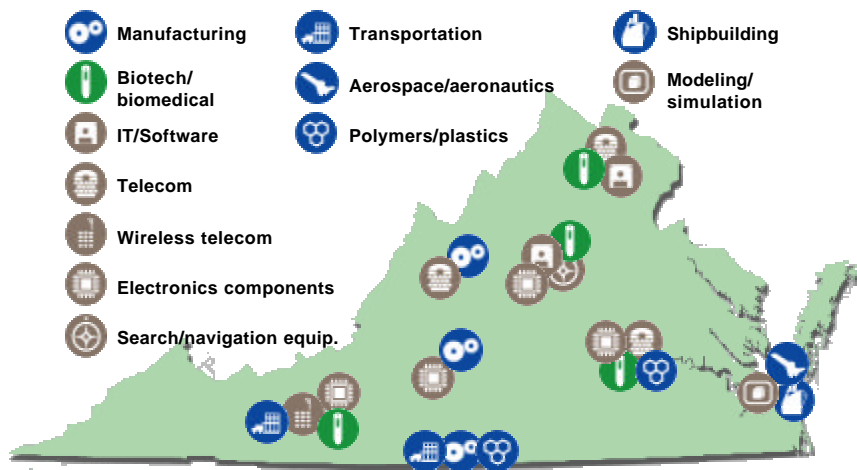
Snapshot: Virginia's Technology Sector

- High quality jobs with salaries double that of Virginia's statewide average salary.

- 12,303 technology firms, employing 327,273 individuals
(Chmura Economics, Q3, 2001)

- Ranked 6th in high-tech employment

- Ranked 11th nationally for VC investment with $100 billion for the region in Q1 2002
(PriceWaterhouseCoopers Money Tree Survey)

Technology in Virginia's Regions

Manufacturing   **Transportation**   **Shipbuilding**

Biotech/ biomedical   **Aerospace/aeronautics**   **Modeling/ simulation**

IT/Software   **Polymers/plastics**

Telecom

Wireless telecom

Electronics components

Search/navigation equip.

Competitiveness of Virginia's R&D Efforts

Virginia has no schools ranked in the top 50 by research and development expenditures:

2000 Rankings of R&D Expenditures at
Virginia's Colleges and Universities

51.	Virginia Tech	173.	George Mason University
58.	University of Virginia	180.	Old Dominion University
106.	Virginia Commonwealth University	188.	Eastern Virginia Medical College
157.	College of William and Mary		

Source: National Science Foundation

Licensing and Patenting Efforts

Virginia's colleges and universities can do better in licensing and patenting efforts:

2000 Comparative Licensing and Patent Data

	Virginia Universities*	Johns Hopkins University	Stanford University	MIT
Invention Disclosures	320	355	252	425
Patent Applications	299	331	240	316
New Licenses and Options	98	127	162	102
Licenses Providing Income	180	166	378	362
Start-up Companies Created	13	10	8	31
Total Patent / Licensing Income	$6.67 million	$14.37 million	$34.60 million	$30.23 million

* GMU, UVa, Virginia Tech and VCU combined

Source: Association of University Technology Managers

Strategic Planning Effort

In the area of fostering technology, the strategic planning effort focuses on three concrete goals:

1. Enhance Federal research funding to Virginia's research institutions.

2. Commercialize intellectual property from universities and laboratories and grow entrepreneurial companies.

3. Promote technology-based economic development.
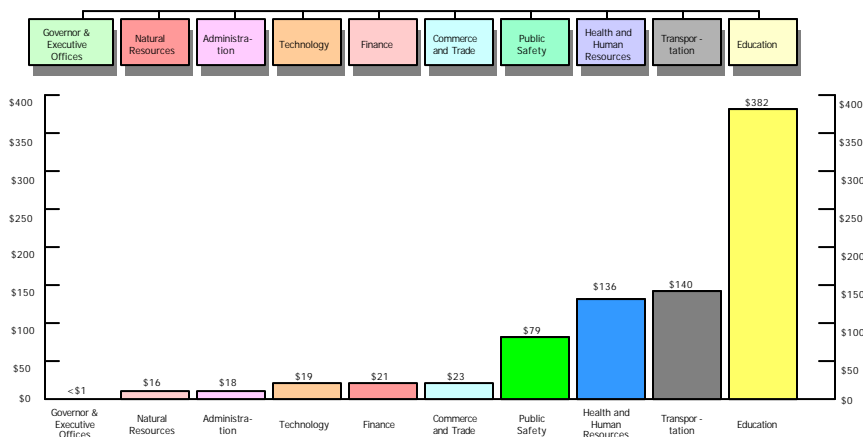
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FY 2001 IT Expenditures by Secretariat
(Millions of Dollars)

| Governor & Executive Offices | Natural Resources | Administra-tion | Technology | Finance | Commerce and Trade | Public Safety | Health and Human Resources | Transpor-tation | Education |

Secretariat	Amount
Governor & Executive Offices	<$1
Natural Resources	$16
Administration	$18
Technology	$19
Finance	$21
Commerce and Trade	$23
Public Safety	$79
Health and Human Resources	$136
Transportation	$140
Education	$382

Enormous Opportunities Abound

Initial observations lead to the conclusion that current practices in information technology throughout state government results in:

- Unnecessary duplication of effort

- Inefficient allocation of resources

- Millions unnecessarily spent on IT projects and resources

- Inability to promote and adopt best practices

Enormous Opportunities Abound

Administrative Management Systems

- $556 million spent during the past 5 years on financial management systems (JCOTS – November 2001)

- IT Strategic Plans for FY 2002 – 2004 (excluding higher education):

  13 different financial management systems

  3 different payroll systems

  3 different human resource systems

Enormous Opportunities Abound

Computing Resources

- 65% of servers (approximately 1300 of 2000) are due for replacement in the next 5 years

- Approximately 1400 LANs administered by 54 different agencies

- Nearly 60% of computers, peripherals and network devices are due for replacement in the next three years.

Enormous Opportunities Abound

Information Technology Workforce

- Average length of tenure at DIT: 17.6 years
  Average length of tenure for all state IT staff: 10.6 years

- Largest IT staffs, excluding higher education:
  Virginia Department of Transportation - 416.5 FTEs
  Department of Information Technology - 250 FTEs
  Department of Motor Vehicles - 155 FTEs

Strategic Planning Effort

In the area of state information technology, the strategic planning effort is focused on an enterprise-wide approach leading to business efficiencies and cost savings:

1. Develop core technologies leading to savings of $100 million annually across executive branch agencies, institutions of higher education, and local governments.

2. Develop a strategic plan for the overhaul of state administrative systems, including efforts to improve financial systems to track IT expenditures.

3. Develop and implement a plan for statewide IT security.

Strategic Planning Effort (continued)

4. Develop and implement a capital planning process for IT and a collaborative business process improvement program.

5. Develop and deploy Web-enabled solutions for government business processes.

6. Overhaul procurement of information technology.

Technology Strategic Plan

*   Culmination of effort: publication of the Secretary's strategic plan on or before September 15, 2002.

*   Encompasses multiple statutes in the Code of Virginia:

    1. "Direct and approve a stakeholder-driven technology strategy development process that results in a comprehensive and coordinated view of research and development goals for industry, academia and government in the Commonwealth." (§2.2-225:1)

    2. "Direct and approve a comprehensive, statewide, four-year planning process; and plan for the acquisition, management and use of information technology. The statewide plan shall be updated annually and submitted to the Governor, the Speaker of the House of Delegates, and the President Pro Tempore of the Senate." (§2.2-226:B.1)

Technology Strategic Plan (continued)

3. "Report annually to the Joint Commission on Technology and Science on the use and application of information technology by state agencies and institutions of higher education to increase economic efficiency, citizen convenience, and public access to state government and to assist the Commission in its effort to stimulate, encourage, and promote the development of technology in the Commonwealth and sound public policies related hereto." (§2.2-226:B.13)

Integration with Legislative Efforts

Strategic planning efforts recognize the direction and initiatives of the legislature:

Initiative	Legislation
Research and Development and Technological Innovation	HB 530 (Devolites)
	HJ 88 (Devolites)
	HJ 206 (Nixon)
Enterprise wide approach to information technology	HB 824 (Nixon)
IT Procurement	HB 519 (Devolites)
IT Security	HB 823 (Nixon)